

RESEARCHING BLENDED LEARNING PRACTICES FOR TEACHERS' PROFESSIONAL LEARNING

ELIZABETH STACEY AND JULIE MACKEY

Abstract:

Since the advent of information and communication technologies (ICT) that link people, especially via the internet, the capability of communities forming through virtual networking has been enthusiastically predicted and pursued while research into online communities for education and for professional learning has produced studies advocating the power of online communities. Most of these studies suggest that such communities form more quickly and set up trust and social presence if participants use blended learning practices and also meet face-to-face or at least meet through a technologically aided meeting. Such blended communities are being advocated more and more as the most effective model for professional learning and most communities in current times draw on electronic communication and resources as a component of their practice. Though the literature has begun to provide accounts of the blended learning practices of these communities, the value of the blended learning processes has not readily been identified or specifically investigated for its impact on professional learning. This paper will describe research into the use of blended learning practices for teachers' professional learning with both technological blends and blending of communities discussed.

INTRODUCTION

Blended learning practices are becoming the basis for much of current academic teaching, research, collaborative writing, course design and professional learning. Though the term *blended learning* is becoming widespread in use and is often used to describe student learning through traditional face-to-face teaching integrating some online teaching, its application to all academic and professional practice extends the term *blended learning practices* and describes a more complex phenomenon. Much of the literature about professional learning and learning communities has only just begun to identify aspects of blended learning practices as significant in their field and there is still an assumption that the blended learning described is a combination of face-to-face and online interaction in courses and professional learning. There are, however, different variations of blended learning and this paper investigates how students in online courses blend their interaction with their face-to-face workplace colleagues –a multi-membership of online learning communities with workplace communities of practice.

Blended learning practices, traditionally consisting of a face-to-face component followed by or combined with an online component (Stacey & Gerbic, 2007; Garrison & Vaughan, 2008), are being definitionally challenged with the term more broadly used to include learning flexibility with a range of technology mixes (Cross, 2006). Mason and Rennie (2006) extend their definition to including “other combinations of technologies, locations or pedagogical approaches” (p.12) and Oliver and Trigwell (2005) have particularly critiqued blended learning as an “ill-defined” term (p. 17). They suggested that blended learning be considered through the variation theory of learning which was:

...based on the idea that for learning to occur, variation must be experienced by the learner. Without variation, there is no discernment, and without discernment, there is no learning...learning occurs when critical aspects of variation in the object of learning are discerned. Discernment is about the experience of difference (2005, p.21).

They argued that blended learning ought to centralise the role of the learner rather than the instruction mode or technology and this study investigates the ways that teachers connect their online learning and daily work. In applying this theoretical perspective to teachers' learning, this study will illustrate how teachers experience variation through their dual membership of the school and online communities. This multi-membership of communities has been dubbed 'boundary spanning' in the professional development literature recognising that professional learning is often prompted by teachers' interactions with external parties (Fullan, 1999; Grossman, Wineburg & Woolworth, 2000). The notion of communities of practice as powerful informal and formal learning communities that exist amongst workers engaged in common workplaces and enterprises (Wenger, 1998) has established credibility as have the use of online communities of learning, described by Paloff and Pratt (2005) who draw on Wenger's ideas of communities. The multi-membership of such communities of practice and online learning and the impact of such a model of professional learning is the focus of this paper which draws on a study into such a community and technology blend. Wenger (1998, p. 218) also acknowledges that membership of different communities is an essential catalyst for learning because it requires the individual to align different perspectives in order to engage in both communities. Multi-membership, or boundary-spanning not only fosters individual learning but can impact whole communities as new practices and ideas are introduced between contexts. As teachers reflect on and discuss their online professional learning, and as they situate their experiences within their everyday work, they instinctively blend online and face-to-face interactions in ways which impact their membership, identity and participation in their work communities.

Stacey, Smith and Barty (2004) explored this multi-membership of communities when they investigated whether there were any potential tensions in multi-membership of workplace communities of practice and online communities of learning. Their study was designed within an interpretive methodology using semi-structured interviews that were analysed principally along qualitative lines, with a simple quantitative analysis as supplement. Seven students in a class of 22 students studying a unit on e-learning in a postgraduate masters course in education and training reflected on their multi-membership of communities, for as well as belonging to an online community of learners, through the unit, they also had an involvement with a community of practice in their professional lives. Although a small study, it yielded clear findings showing that, overall, the enhancements resulting from the simultaneous involvement of the study's participants in both workplace and learning communities outweighed the disturbances or disruptions experienced. Multi-membership of communities affected the study's participants in a number of ways. Participants described a difference in the theoretical focus of the online community and the practical application of the "real" community they belonged to which resulted in a stronger sense of belonging to their workplace community of practice because they dealt with real issues instead of theoretical issues that did not influence their daily lives. They also noted the difference between interacting with other students which can be a transient experience and the ongoing experience of interacting with

their more permanent colleagues in the workplace. If the issues under discussion online were relevant to their work, they engaged strongly with the online learning community. Two thirds of the group described the online community enhancing their work through the opportunity for their growth in understanding, a clarification of their thinking, the ability to present ideas to others, the capacity to initiate or develop programs and leadership in their professional practice. Their online discussions helped in their benefitting their workplace communities of practice through such specific outcomes as writing papers for an organisation or community to consider, formulating proposals for the development of an organisation or business, designing learning programs on sound theoretical principles, all of which involved the generation of ideas amongst working colleagues. The blending of the online community with their face-to-face communities was perceived as a beneficial aspect of their professional learning.

Interest in the learning processes associated with multi-membership of communities has grown since this study was initiated and there seems to be a deepening need to understand learning trajectories which cross boundaries. A 2006 issue of the *Journal of Technology and Teacher Education* which reported a Harvard University conference on the topic focused on the role of online communities in teacher professional development and identified the value, and the difficulties, of establishing online communities for this purpose which were also seen as a potential vehicle for mentoring and teacher retention (Sprague, 2006). The interaction of real and online communities as an effective model was described by Parr and Ward (2006) where teachers were willing to post and share resources online because they were part of a “well-functioning professional learning community within a school” (p.785).

Maor and Volet (2007) conducted a literature analysis of research studies published between 2000 and 2005 where interactivity was a feature of online professional learning. They noted some disconnect between work and study contexts, with many of the courses focused on developing "general knowledge and skills, with limited opportunities for participants to use their specific work environment and experience as a resource in their study or vice versa" (p. 279). Maor and Volet also noted that professionals engaged in online learning experienced varying degrees of support from their workplaces, noting issues related to time and access. In an even more recent study, Conrad (2008), examining the intersection of online and workplace communities to seek greater understanding of the way that online learning impacts on learners' relationships with their work environment found this to be less than expected. The study included surveys and interviews of the perspectives of ten adult learners and workplace colleagues of six of these participants. Almost all of the ten learners reported a high degree of relevance between their online study and their paid work and noted the personal professional benefits of their learning in relation to their work. Workplace contacts reported varying degrees of understanding about the online learning of their colleagues and the impact that this learning had on the workplace but only two out of the six co-workers reported any significant impact in terms of increased knowledge introduced to the workplace. Conrad's study endorsed the importance of providing online learning communities but highlighted that "learners' learning experiences did not appear to transform the workplace in meaningful ways" (p. 16) nor did it significantly contribute to a greater sense of community within the work environment. Overall it was personal connections in the workplace which dictated the level of communication and interaction, and stronger affinities were

apparent when workplace colleagues were also engaged in online learning. Conrad found the most interesting aspect was the level of support evident in the online community and the sense of belonging and cohesiveness felt by the participants.

Such blending of online and work communities as the review of the research literature revealed was the specific focus of the study described below. The capability and value of a blending of real and online communities as a model for professional learning of teachers was explored through this case study research.

RESEARCH STUDY METHODOLOGY AND DESIGN

This case study was designed to investigate and explain the learning processes inherent in teachers' online professional development and the blended nature of learning which occurs in the intersection between the virtual course environment and the participating teachers' situated contexts. Case study enables researchers to investigate ordinary practices in their naturalistic settings (Stake, 2003) and to conduct in-depth analysis of the complexities and features (Cresswell, 1998). This study investigated the ordinary practices of 15 teachers studying for a graduate qualification in information and communication technology in education and reported on their experiences. The primary objective of the study was to analyse and describe the teachers' learning experiences across different online courses contributing to a deeper understanding of how teachers connected formal online study with their teaching practice, and how they interacted in both environments in ways which overcame the problems frequently associated with transferring formal learning between contexts. Courses in this programme were one-semester long, with the exception of a full-year research project which was usually undertaken as the last course in the qualification. Most of the participants were working full-time while studying part-time. Data for the wider study were collected in three phases: (1) an anonymous online questionnaire; (2) interviews with 15 teachers as well as analysis of their online contributions and interactions, coursework and assignments; and (3) interviews with colleagues of four of the case study teachers.

The 15 teachers were experiencing multi-membership as participants in the online course communities and simultaneous dual participation in their school-based communities of practice as early childhood, primary or secondary teachers. The teachers did not comprise one cohort as the online programme was based on a flexible structure allowing teachers to map their own study pathway taking courses in the order which met their learning needs. Individual courses were taught over a 15-week semester where participants met together in an online space to interact regularly with each other and their lecturer. The formal requirements varied between courses, however typical elements fell into three broad categories: (1) participation in the online course community via discussions, small group work, presentations, sharing of resources and ideas, and peer review; (2) individual reading and reflection; and (3) formal assignments which were usually related to teachers' classroom practice and involved among other activities, the planning, implementation and evaluation of a specific ICT-related strategy; the design, development and testing of a resource; an evaluation of ICT resources or strategies within the school; or the planning and implementation of an action research project within the school setting.

Thirty interviews were conducted with the participating teachers and these interviews focused on the teachers' perceptions of their professional development. In the initial

semi-structured interview teachers were prompted to describe their online learning experiences and their relationship with the online course community, significant learning experiences, and relevance of their study for their work. Follow-up interviews explored the themes which emerged from the first interview. All interviews were transcribed, imported to NVivo and analysed inductively following hermeneutic principles. Categories and emerging patterns were identified and abstracted themes were supported with detailed examples. Data were coded as the study progressed thus allowing emerging themes and ideas to be examined closely and in a cyclical manner. The data collection and analysis was shaped by the communities of practice conceptual framework and the interpretation process demanded ongoing questioning and critiquing of the framework in relation to the data, and vice versa (Toma, 2006; Cresswell, 2003).

The online participation of the teachers was analysed at two levels. Firstly, quantitative records were collated for all 15 teachers across 65 course enrolments. These summaries identified the frequency of log-ins, the time spent online; the total number of actions or 'page views' activated by the teacher in each online site; and the total number of posts they contributed to interactive areas (including discussion forums, peer review areas, public journal spaces and any other areas designed to be accessed by colleagues but not assignment dropbox areas). Secondly, qualitative analysis narrowed the focus to the online contributions of a sub-set of eight teachers. This analysis included their participation in one common course, as well as supporting data from other online courses. A content analysis framework was developed using a clean slate approach (Gerbic & Stacey, 2005) based on Wenger's communities of practice social theory of learning. The framework began with three key characteristics of communities of practice in order to understand how teachers functioned within the online community. Sub-categories were developed by examining the data and returning to Wenger's descriptions of the three characteristics. This process cycled between the data and the theory, and resulted in the identification of categories and indicators for those categories. Indicators were refined as data analysis progressed and redundant indicators were eliminated by merging with other nodes.

One of the key strategies of this study included interviews with teaching colleagues from the case study teachers' workplace community. Four teachers nominated colleagues who were willing to be interviewed about their working relationship with the case study teacher and the extent to which their online study filtered through to the school community. Eleven colleagues were interviewed (three teachers nominated three colleagues each, and one teacher nominated two colleagues). These interviews provided an external perspective from the workplace context and offered insight into the dual membership of the case study teachers, corroborating and verifying their perspectives of what it meant to belong simultaneously to both study and workplace communities.

FINDINGS AND DISCUSSION

The research revealed that the participants were generally positive about their experiences of multi-membership but were frank in their appraisal of what supported and what hindered their participation, particularly in the online community. Some of these factors are summarised below.

The online mode facilitated multi-membership for teachers who were geographically distant and proximate. Fully online study provided flexibility for teachers, and even those who lived in close proximity to the university noted this as an advantage as they could fit study into or around demanding work schedules. Teachers working in rural or remote areas and one teacher working overseas recognised that online learning provided flexibility to study while remaining in their communities. Coupled with flexibility were advantages associated with immediacy and interactivity, as the online mode provided feedback and opportunities for interaction in ways not possible in paper-based distance courses. Those fortunate to have colleagues from the same school studying in the same courses designed their own blend of online and face-to-face learning as they formed local study groups and posted summaries of their discussions to the online areas. Some of the teachers also noted that the online mode suited their learning style as the written nature of the environment meant they could revisit material. Teachers also noted that studying online boosted their confidence to use online strategies with their own students, and the experience of being an online learner translated into enhanced professional understanding and capability.

Participation in the online community varied considerably amongst the teachers and amongst the courses they studied. Measures of log-in frequency, time spent online, and number of interactive posts provided one perspective of teachers' engagement, but these were not good indicators of their online interaction. Nor were they useful indicators of how connected teachers felt to the online community as even some of the teachers who participated regularly, frequently, and substantially described only a superficial sense of belonging to a community of learners.

Teachers valued the opportunity to read others' opinions and to discuss ideas, and in most courses they also engaged in and appreciated online activities such as peer review of work, collaborative interpretation of research, and seminar presentations. The teachers recognised the online course community as a bounded entity where they interacted with others for a semester. While they recognised features such as course design, specific activities and facilitation which contributed to a sense of community on the whole they were neutral about the importance of these features. On one hand they appreciated these aspects if they existed but they were not missed if they were absent. There were exceptions, and one teacher stated that both of the courses she was discussing had established a definite sense of community but that they were quite different owing to design factors and types of activities.

Despite the apparent detachment for most teachers, all eight of the online focus group teachers engaged in the online activities in ways which demonstrated social presence, and which established a convivial class atmosphere. Simple social indicators like greetings, emoticons, referring to others by name, sharing personal stories, and humour contributed to the online environment. However, even those teachers who demonstrated strong social presence and sustained levels of participation were ambivalent about their online relationships with other course members and described only weak and temporal belonging to the online community. Online relationships were passing and random as teachers may or may not encounter the same people in subsequent courses. Where teachers had been studying for some time, or where they became part of an informal cohort selecting the same courses in the same order, then there was an enhanced sense of belonging to a group. Overall, membership of the online community and participation in it served a purpose.

The impact of multi-membership of communities was reflected on by participants who shared numerous examples of personal and professional growth related to their online study. In some cases this was based on new skills and practical competence, for example knowing how to construct a web page or use a Web 2.0 tool; in other cases developing a theoretical rationale for pedagogical approaches was important; or the sense of authority which came from reading, understanding and carrying out research projects. Several of the teachers identified how their study equipped them for particular aspects of their job or helped them to win new teaching positions. Two teachers began new jobs during the research period and both moved to positions where ICT and e-learning were integral to their work. Several teachers were either ICT facilitators or ICT lead teachers in their schools and they were able to adapt their own professional learning to support school-based colleagues. Where teachers had responsibility for leading a department or syndicate, or facilitating ICT in their schools these roles provided legitimate openings and reasons for introducing new ideas and strategies.

Because teachers were implementing ideas with their classes there were natural opportunities to discuss ideas originating in the online community with peers. For example, teachers were naturally enthusiastic about children's learning and proud of their work, and they tended to talk about this to colleagues. One teacher created a blog to document her involvement in a conservation project and to allow children to follow her activities and interact with her when she was away from the classroom. As a result of her experiences a colleague also created a blog to support a similar project. In another example one of the secondary teachers developed and trialled a web-based project and then other teachers in the department also used the activity. One of the primary teachers who was on study leave developed an online blended activity for a group of high achieving students and shared this with colleagues, while another primary teacher implemented a technology-enabled creativity programme with her junior class but which filtered through to others in her syndicate.

While teachers were open to sharing their professional learning with colleagues in their school communities they noted a number of tensions and difficulties associated with this. Some school environments were not conducive to collegial discussions about professional learning, and while this may occur informally in small groups such as departments or syndicates, it was not part of the school culture and not encouraged. Teachers noted a lack of interest by colleagues, a culture of independence, and a tendency by some colleagues to dismiss ICT related talk as appropriate for the teacher doing study but not something they were personally interested in because they lacked the skills or confidence.

In spite of the difficulties noted above all 15 of the teachers regarded the professional development as relevant, and spoke positively about the synergy between their study and work. For some teachers this meant a deeper understanding of their own teaching philosophy informed by theoretical perspectives, while for others the gains were increased confidence and capability in the pedagogical use of technology. Teachers spoke of the professional development as helping them to feel equipped and assisting them to "keep up with the play". Teacher-led practitioner research emerged as an important strategy which created legitimate connections between study and work. Many of the course assignments required teachers to plan, implement and evaluate

learning episodes with students and then to reflect on these experiences from practical and theoretical perspectives. In two courses teachers undertook more formal research projects. Multi-membership of learning and work communities converged as teachers assumed the role of researcher, frequently involving colleagues in the project either directly as participants, or indirectly through sharing of resources and research findings eg their literature reviews or research reports.

CONCLUSION

The online learning community in online university courses draws teachers from across many communities of practice, connecting these communities in a transitory manner, and offering opportunities for learning in the intersection which is temporal and loosely coupled. Wenger talks of constellations of communities of practices, and these teachers represented a constellation of teaching communities. While sharing common understandings of the teaching profession the online course groups represented diverse teaching contexts and specialisations.

For most participants these courses were their first introduction to online study and they found themselves reconciling dual identities as experienced teacher and novice online learner. Teachers were *legitimate* but *peripheral* members (Wenger, 1998) of the online learning community because of their professional experience. They expressed confidence about sharing examples from their daily work in the online community. They had no real expectations of becoming anything other than peripheral in this online community but their multi-membership created the opportunity for them to blend the two worlds, contextualising and appropriating new ideas and strategies in light of their professional practice.

These studies provide an alternative interpretation of blended learning which recognises the potential of learners to mediate the boundaries of online learning communities and their professional communities of practice. Blending occurs through the participatory experiences on and off-line, as learners make connections between their workplace contexts and the new ideas, people and experiences offered via multi-membership in virtual communities. Research opportunities exist to explore the nature of this multi-membership further and to identify how the boundaries between workplace and formal learning might become more permeable and conducive to the needs of adult learners in the workplace.

REFERENCES

- Conrad, D. L. (2008). From community to community of practice: Exploring the connection of online learners to informal learning in the workplace. *American Journal of Distance Education*, 22(1), 3-23.
- Cresswell, J. W. (1998). *Qualitative inquiry and research design: choosing among five traditions*. Thousand Oaks, CA: Sage Publications Inc.
- Cross, J. (2006). Foreward. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. xvii-xxiii). San Francisco: Pfeiffer.
- Fullan, M. (1999). *Change forces: The sequel*. London: The Falmer Press.
- Garrison, D. R., & Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. San Francisco: Jossey-Bass.

- Gerbic, P., & Stacey, E. (2005). A purposive approach to content analysis : Designing analytical frameworks. *The Internet and Higher Education*, 8, 45-59.
- Grossman, P., Wineburg, S., & Woolworth, S. (2000). What makes teacher community different from a gathering of teachers?, *An occasional paper co-sponsored by Center for the Study of Teaching and Policy and Center on English Learning and Achievement (CELA)* (pp. 61). Washington: University of Washington.
- Hanson, K. S., & Clem, F. A. (2006). To blend or not to blend: A look at community development via blended learning strategies. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 136-149). San Francisco: Pfeiffer.
- Maor, D., & Volet, S. (2007). Interactivity in professional online learning: A review of research based studies. *Australasian Journal of Educational Technology*, 23(2), 269-290.
- Masie, E. (2006). The blended learning imperative. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs* (pp. 22-26). San Francisco: Pfeiffer.
- Mason, R. & Rennie, F. (2006). *Elearning: The key concepts*. London: Routledge.
- Oliver, M., & Trigwell, K. (2005). Can blended learning be redeemed? *E-learning*, 2(1), 17-26.
- Palloff, R. & Pratt, K. (2005). *Collaborating online: Learning together in community*. San Francisco: Jossey-Bass.
- Parr, J. & Ward, L. (2006). Building on foundations: Creating an online community. *Journal of Technology and Teacher Education*, 14(4), 775-793.
- Sprague, D. (2006). Research agenda for online teacher professional development. *Journal of Technology and Teacher Education*, 14(4), 657-661.
- Stacey, E., & Gerbic, P. (2007). Teaching for blended learning - Research perspectives from on-campus and distance students. *Educational and Information Technologies*, 12(3), 165-174.
- Stacey, E., Smith, P.J. & Barty, K. (2004). Adult learners in the workplace: Online learning and communities of practice. *Distance Education*, 25, 1, 107-124.
- Stake, R. (2003). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (2nd ed.). Thousand Oaks, C.A.: Sage Publications Inc.
- Toma, J. D. (2006). Approaching rigor in applied qualitative research. In C. F. Conrad & R. C. Serlin (Eds.), *The Sage Handbook for Research in Education. Engaging Ideas and Enriching Inquiry* (pp. 405-424). Thousand Oaks, C.A.: Sage Publications.
- Wenger, E. (1998). *Communities of practice: Learning, meaning and identity*. Cambridge: Cambridge University Press.